



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,691	05/30/2001	Yoshihiko Yano	209212US0	6080

22850 7590 03/11/2002

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER

NGUYEN, JOSEPH H

ART UNIT PAPER NUMBER

2815

DATE MAILED: 03/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,691

Applicant(s)

YANO ET AL.

Examiner

Joseph Nguyen

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "2" and "7" have both been used to designate a layer right below layer 3 in figure 1. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "7" in figure 1. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Dye et al.

Regarding claim 1, Dye et al discloses on figure 1 an EL phosphor multiplayer thin film wherein a phosphor thin film and a dielectric thin film are stacked one upon another, said phosphor thin film comprising a matrix material containing as a main component at least one compound selected from an alkaline earth thiogallate and a rare earth element as a luminescent center, and said dielectric thin film comprising an alkaline earth oxide (col. 3, lines 1-33).

Regarding claim 3, Dye et al discloses on figure 1 the rare earth element is Eu (col. 3, lines 8-9).

Regarding claim 4, Dye et al discloses on figure 1 the alkaline earth oxide is a perovskite oxide.

Regarding claim 5, Dye et al discloses on figure 1 the alkaline earth oxide is barium titanate (col. 3, lines 21-22).

Regarding claim 6, Dye et al discloses on figure 1 the dielectric thin film has a specific dielectric constant of 100 or greater.

Regarding claim 7, Dye et al discloses on figure 1 the dielectric thin film has a thickness of 100nm or greater (col. 3, lines 21-22).

Regarding claim 8, Dye et al discloses on figure 1 the EL phosphor multilayer thin film as recited in claim 1.

Art Unit: 2815

Claims 1, 3, 4, 7, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al.

Regarding claim 1, Sun et al discloses on figure 5 an EL phosphor multilayer thin film wherein a phosphor thin film and a dielectric thin film are stacked one upon another, said phosphor thin film comprising a matrix material containing as a main component at least one compound selected from an alkaline earth thiogallate (col. 1, lines 60-61) and said dielectric thin film comprising an alkaline earth oxide.

Regarding claim 3, Sun et al discloses on figure 5 the rare earth element is Eu (col. 5, line 34).

Regarding claim 4, Sun et al discloses on figure 5 the alkaline earth oxide is a pervoskite oxide.

Regarding claim 7, Sun et al discloses on figure 5 the dielectric thin film has a thickness of 100nm or greater (col. 2, lines 66-67).

Regarding claim 8, Sun et al discloses on figure 5 an EL phosphor multiplayer thin film as recited in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dye et al or Sun et al as applied to claim 1 above, and further in view of Miura et al.

Regarding claim 2, Dye et al or Sun et al discloses substantially all the structure set forth in the claimed invention except the matrix material being a barium thioaluminate. However, Miura et al discloses the matrix material being a barium thioaluminate. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dye et al or Sun et al by having the matrix material being a barium thioaluminate for the purpose of improving the high luminance blue emitting electroluminescent device as taught by Miura et al.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai et al in view of Miura et al.

Regarding claims 1-8, Kitai et al discloses on figure 1 substantially all the structures set forth in the claimed invention except the matrix material being a barium thioaluminate. However, Miura et al discloses the matrix material being a barium thioaluminate. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kitai et al by having the matrix material being a barium thioaluminate for the purpose of improving the high luminance blue emitting electroluminescent device as taught by Miura et al.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6004618 to Mizutani et al discloses an EL device having a high quality luminescent layer.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (703) 308-1269. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-7382 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JN
March 5, 2002



EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800